

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A multilayered gas sensing element for incorporation into a gas sensor installed in an exhaust system of an internal combustion engine, the multilayered gas sensing element comprising:

laminated layers comprising at least one solid electrolytic sheet containing zirconia and yttria and at least one insulating sheet containing alumina; and

a crystal phase containing silicon dioxide which intervenes between said solid electrolytic sheet and said insulating sheet at least at a part of a bonding boundary between said solid electrolytic sheet and said insulating sheet; and

a heater directly attached to a side surface of said insulating sheet to transfer heat generated in said heater to said insulating sheet and said solid electrolytic sheet,

wherein said solid electrolytic sheet and said insulating sheet having said heater are laminated and sintered to be integrally bonded with each other and to obtain the crystal phase.

2. (Previously presented) A multilayered gas sensing element as in claim 1, wherein said crystal phase further contains at least one component selected from the group consisting of: calcium oxide, magnesium oxide, barium oxide, and strontium oxide.

3. (Previously presented) A multilayered gas sensing element as in claim 1, wherein said bonding boundary between said solid electrolytic sheet and said insulating sheet is undulated.

4. (Previously presented) A multilayered gas sensing element as in claim 1, wherein said solid electrolytic sheet and said insulating sheet are directly bonded to each other at a remaining part of the bonding boundary, so that a crystal lattice of said solid electrolytic sheet is directly connected to a crystal lattice of said insulating sheet at the remaining part of said bonding boundary.

5. (Previously presented) A multilayered gas sensing element as in claim 1, wherein a thermal expansion coefficient difference between said solid electrolytic sheet and said insulating sheet is equal to or less than 2×10^{-6} .

6. (Previously presented) A multilayered gas sensing element as in claim 1; wherein a sintering contraction coefficient difference between said solid electrolytic sheet and said insulating sheet is equal to or less than 3%.

Claims 7-13. (Canceled).

14. (Previously presented) The multilayered gas sensing element in accordance with claim 4, wherein a specific face of said crystal lattice of said solid electrolytic sheet specified by a Miller index of $(2 \bar{1} \bar{1} 0)$ is directly connected to a specific face of the crystal lattice of said insulating sheet specified by a Miller index of $(1 0 0)$.

Claim 15. (Canceled).